

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 (Original). Apparatus for measuring a plurality of optically detectable beads, such as polymer beads, said apparatus comprising
- a) a vacuum container comprising at least one planar capture body capable of rotating around a central axis, wherein said capture body comprises a plurality of through-going inlets, wherein the diameter of each inlet is smaller than the average diameter of the beads to be measured and/or analysed and/or sorted,
 - b) a pressure controlling device capable of controlling the pressure in the vacuum container, and
 - c) a device for rotating the vacuum container around the axis of the capture disc.
 - d) a device for measuring at least one property of at least one bead.

2 (Currently Amended). The apparatus according to claim 1 wherein the ratio R between a) the average diameter of the beads being manipulated, and b) the diameter of the through-going inlets, $R=a/b$, is more than 2, ~~such as more than 4, for example more than 6, such as more than 8, for example more than 10, such as more than 12, for example more than 14, such as more than 16, for example more than 18, such as more than 20, for example more than 25, such as more than 30, for example more than 35, such as more than 40, for example more than 50, and preferably less than 100.~~

3 (Currently Amended). The apparatus according to ~~any of~~ claims 1 ~~and 2~~, wherein the capture body is a planar disc.

4 (Currently Amended). The apparatus according to ~~any of~~ claims 1, ~~to 3~~ wherein the distance between the axis of rotation of the capture body and each of the through-going inlets of the capture body is the same for each of the through-going inlets of the capture body.

5 (Currently Amended). The apparatus according to claim 4, wherein the distance between neighbouring through-going inlets is the same for all pairs of neighbouring through-going inlets.

6 (Currently Amended). The apparatus according to ~~any of~~ claims 1 ~~to~~ 5 further comprising a circular capture disc support supporting the capture disc at a distal end and being connected at a proximal end to a hollow shaft, wherein the hollow shaft is fitted with a shaft opening so that a vacuum can be applied to the interior of the vacuum container.7

7 (Original). The apparatus according to claim 6 further comprising a vacuum container housing comprising an outer cylinder comprising an opening for connecting the shaft hole with the pressure controlling device, and a guiding plate comprising at least one opening allowing the through-going inlets to be accessible to beads to be loaded onto the capture disc, said guiding plate being attached to the top part of the outer cylinder, thereby defining in the space between the

guiding plate and the capture disc a guiding channel for harbouring beads, said guiding plate confining the vacuum container to the interior of the vacuum container housing.

8 (Currently Amended). The apparatus according to ~~any of~~ claims 1 ~~to~~ 7, wherein the vacuum container is connected to a device for rotating the vacuum container, such as a stepper motor, operably linked to a momentum transfer split for transferring the momentum from the stepper motor to the vacuum container thereby causing the vacuum container to rotate in a controlled step-wise fashion.

9-21 (Cancelled).

22 (Currently Amended). The apparatus according to ~~any of~~ claims 1 ~~to~~ 21 further comprising an analysing device for analysing results being generated from the measurement of the at least one property of the at least one bead, wherein said analysis enables individual beads to be characterised and/or identified and optionally also sorted.

In re of: 10/583,997

23-24 (Cancelled).

25 (Currently Amended). The apparatus according to ~~any of~~ claims 22 ~~to 24~~ further comprising at least one device for sorting a plurality of beads on the basis of the result generated by the analysing device.

26-30 (Cancelled).

31 (Currently Amended). The apparatus according to ~~any of~~ claims 1 ~~to 30~~ further comprising a treating device for treating at least one bead optionally having been subjected to measuring or analysing.

32-48 (Cancelled).

49 (Currently Amended). A method for measuring at least one property of at least one bead of a plurality of beads, such as polymer beads, said method comprising the steps of

- i) providing a plurality of beads each comprising at least one label,
- ii) providing an apparatus for measuring at least one property of at least one bead according to ~~any of claims 1 to 48,~~
- iii) contacting at least one bead of the plurality of beads provided in step i) with the vacuum container capture body of the apparatus provided in step ii),
- iv) rotating the capture body to transfer at least one bead from the loading section of the vacuum container to the measuring section of the vacuum container, and
- v) using the measuring device of the apparatus for measuring at least one property of at least one bead.

50 (Currently Amended). A method for analysing data generated by measuring at least one property of at least one bead of a plurality of beads, such as polymer beads, said method comprising the steps of

- i) providing a plurality of beads each comprising at least one label,

- ii) providing an apparatus for analysing at least one property of at least one bead according to ~~any of claims 22 to 48~~,
- iii) contacting at least one bead of the plurality of beads provided in step i) with the vacuum container capture body of the apparatus provided in step ii),
- iv) rotating the capture body to transfer at least one bead from the loading section of the vacuum container to the measuring section of the vacuum container,
- v) using the measuring device of the apparatus for measuring at least one property of at least one bead, and
- vi) analysing data generated by the measuring device for measuring at least one property of at least one bead.

51 (Currently Amended). A method for identifying at least one bead of a plurality of beads, such as polymer beads, said method comprising the steps of

- i) providing a plurality of beads each comprising at least one label,
- ii) providing an apparatus for analysing at least one property of at least one bead according to ~~any of claims 22 to 48~~,

iii) contacting at least one bead of the plurality of beads provided in step i) with the vacuum container capture body of the apparatus provided in step ii),

iv) rotating the capture body to transfer at least one bead from the loading section of the vacuum container to the measuring section of the vacuum container,

v) using the measuring device of the apparatus for measuring at least one property of at least one bead, and

vi) using the analysing device for analysing data generated by the measuring device for measuring at least one property of at least one bead, and

vii) identifying at least one bead of a plurality of beads by analysing the data generated by the measuring device for measuring at least one property of at least one bead.

52 (Currently Amended). A method for sorting at least one bead of a plurality of beads, such as polymer beads, said method comprising the steps of

i) providing a plurality of beads each comprising at least one label,

- ii) providing an apparatus for sorting at least one bead according to ~~any of claims 25 to 48~~,
- iii) contacting at least one bead of the plurality of beads provided in step i) with the vacuum container capture body of the apparatus provided in step ii),
- iv) rotating the capture body to transfer at least one bead from the loading section of the vacuum container to the measuring section of the vacuum container,
- v) using the measuring device of the apparatus for measuring at least one property of at least one bead,
- vi) using the analysing device for analysing data generated by the measuring device for measuring at least one property of at least one bead, and
- vii) sorting the at least one bead of a plurality of beads based on the result of the analysis performed in step vi).

53 (Currently Amended). A method for sorting at least one bead of a plurality of beads, such as polymer beads, said method comprising the steps of

- i) providing a plurality of beads each comprising at least one label,
- ii) providing an apparatus for sorting at least one bead according to ~~any of claims 25 to 48~~,
- iii) contacting at least one bead of the plurality of beads provided in step i) with the vacuum container capture body of the apparatus provided in step ii),
- iv) rotating the capture body to transfer at least one bead from the loading section of the vacuum container to the measuring section of the vacuum container,
- v) using the measuring device of the apparatus for measuring at least one property of at least one bead, and
- vi) using the analysing device for analysing data generated by the measuring device for measuring at least one property of at least one bead,
- vii) identifying at least one bead of a plurality of beads by analysing the data generated by the measuring device for measuring at least one property of at least one bead, and
- viii) sorting the at least one bead of a plurality of beads based on the identification performed in step vii).

54 (Currently Amended). A method for treating at least one bead of a plurality of beads, such as polymer beads, said method comprising the steps of

- i) providing a plurality of beads each comprising at least one label,
- ii) providing an apparatus for treating at least one bead according to ~~any of claims 31 to 48~~,
- iii) contacting at least one bead of the plurality of beads provided in step i) with the vacuum container capture body of the apparatus provided in step ii),
- iv) rotating the capture body to transfer at least one bead from the loading section of the vacuum container to the measuring section of the vacuum container,
- v) using the measuring device of the apparatus for measuring at least one property of at least one bead,
- vi) analysing data generated by the measuring device for measuring at least one property of at least one bead, and
- vii) treating at least one bead of a plurality of beads based on the result of the analysis performed in step vi).

55 (Currently Amended). A method for treating at least one bead of a plurality of beads, such as polymer beads, said method comprising the steps of

- i) providing a plurality of beads each comprising at least one label
- ii) providing an apparatus for treating at least one bead according to ~~any of claims 31 to 48~~,
- iii) contacting at least one bead of the plurality of beads provided in step i) with the vacuum container capture body of the apparatus provided in step ii),
- iv) rotating the capture body to transfer at least one bead from the loading section of the vacuum container to the measuring section of the vacuum container,
- v) using the measuring device of the apparatus for measuring at least one property of at least one bead, and
- vi) using the analysing device for analysing data generated by the measuring device for measuring at least one property of at least one bead,

vii) identifying at least one bead of a plurality of beads by analysing the data generated by the measuring device for measuring at least one property of at least one bead, and
viii) treating at least one bead of a plurality of beads based on the identification obtained in step vii).

56 (Currently Amended). A method for treating at least one bead of a plurality of beads, such as polymer beads, said method comprising the steps of

- i) providing a plurality of beads each comprising at least one label,
- ii) providing an apparatus for treating at least one bead according to ~~any of claims 31 to 48~~,
- iii) contacting at least one bead of the plurality of beads provided in step i) with the vacuum container capture body of the apparatus provided in step ii),
- iv) rotating the capture body to transfer at least one bead from the loading section of the vacuum container to the measuring section of the vacuum container,

v) using the measuring device of the apparatus for measuring at least one property of at least one bead,
vi) analysing data generated by the measuring device for measuring at least one property of at least one bead,
vii) sorting the at least one bead of a plurality of beads based on the result of the analysis performed in step vi), and
viii) treating the at least one bead of a plurality of beads having been sorted in step vii).

57 (Currently Amended). A method for treating at least one bead of a plurality of beads, such as polymer beads, said method comprising the steps of

i) providing a plurality of beads each comprising at least one label,
ii) providing an apparatus for treating at least one bead according to ~~any of claims 31 to 48~~,
iii) contacting at least one bead of the plurality of beads provided in step i) with the vacuum container capture body of the apparatus provided in step ii),

- iv) rotating the capture body to transfer at least one bead from the loading section of the vacuum container to the measuring section of the vacuum container,
- v) using the measuring device of the apparatus for measuring at least one property of at least one bead, and
- vi) using the analysing device for analysing data generated by the measuring device for measuring at least one property of at least one bead,
- vii) identifying at least one bead of a plurality of beads by analysing the data generated by the measuring device for measuring at least one property of at least one bead,
- viii) sorting the at least one bead of a plurality of beads based on the identification performed in step vii), and
- ix) treating the at least one bead of a plurality of beads having been sorted in step viii).

58 (Currently Amended). The method of ~~any of claims 49 to 57~~, wherein the measuring of at least one property of at least one optically detectable bead located in the measuring section of the apparatus comprises the steps of

In re of: 10/583,997

- i) activating a source of illumination,
- ii) capturing at least one image of the at least one optically detectable bead, and
- iii) optionally storing the at least one image of the at least one optically detectable bead.

59-151 (Canceled).